

# Hobbies

## WEEKLY

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IN the absence of a refrigerator, some form of keeping milk, butter, etc., fresh in hot weather is very desirable. In fact it is necessary if waste of good food is to be avoided. The ice box, illustrated, comes in invaluable here, as it will keep provisions fresh in the hottest weather.

#### Ice Wanted

A supply of ice must be assured, but this should not prove difficult in most districts, and the quantity needed is quite small. It might pay, in fact, to purchase one of those home ice-makers so frequently advertised during the summer months for the supply, especially as such a machine could be used for making ice cream and iced dishes for the table, as well.

The box should be of solid construction. Quite likely a good strong one could be bought at the grocers and be

## A HOME-MADE ICE BOX

suitable for the purpose. If not, a few feet of  $\frac{3}{4}$  in. deal board could be used to make it. Some useful dimensions are given in the diagram, Fig. 1, for the box, and should provide sufficient space for a milk bottle, butter dish, and meat or fish dish. One side of the box is omitted to allow of the interior arrangements being shown.

The corner joints should be well glued and nailed, and a stout bottom glued on, not the more usual one of

thinner wood. Those who do not mind a little trouble could dovetail the corner joints, with advantage, even a rebated joint would be better than just a plain butt joint. Clean up the work when the glue is hard and see that each joint is close up—not gaps anywhere.

#### Lid Rest

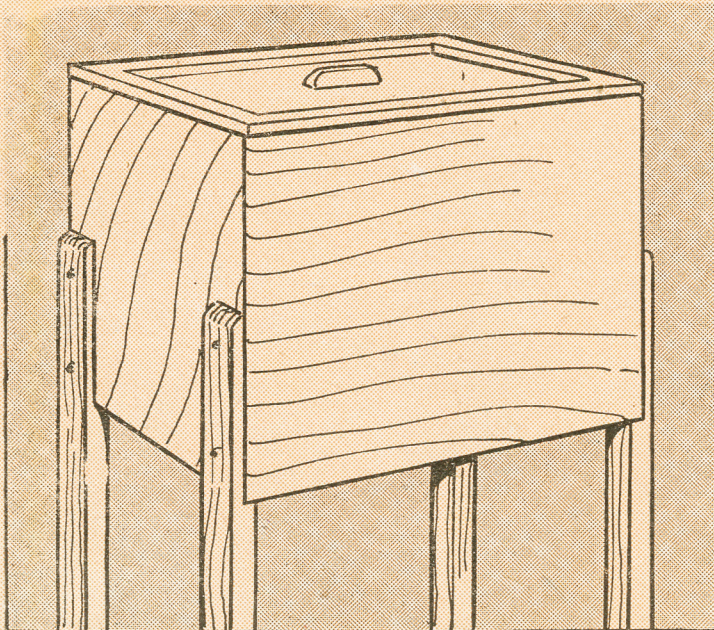
At a distance down from the top, equal to the thickness of wood to be used for the lid, glue and nail across  $\frac{1}{2}$  in. by  $1\frac{1}{2}$  in. wood fillets, as shown at (A). One is fixed to one end of the box, the other at a distance of  $3\frac{1}{2}$  ins. from the opposite end.

On these the lid will rest. Between the latter fillet and the box end, nail  $\frac{1}{2}$  in. by 1 in. fillets across. These support the ice tray. Note these fillets are set  $\frac{1}{2}$  in. below the top of the cross fillets, so that the lid will not contact the ice tray.

Directly underneath the cross fillet mentioned above fix another, of similar section to the bottom of the box. This is shown at (B) and keeps the draining tray in place. At this stage it may be mentioned that the ice tray is placed to rest upon the short fillets above, and the draining tray directly below it, on the bottom of the box, so that the ice, as it melts in the box, will drip into the tray.

#### Metal Trays

For these trays some sheet zinc will be required, of fairly stout gauge. They are quite easily made, even by the amateur. For the ice tray, mark out on the zinc the pattern shown in Fig. 3. Bend up the sides and ends on the dotted lines, and press the corners together, as at (C).





Bend these corners over to the sides, and hammer lightly down, and the two end flanges bend down at right angles, as at (D). Punch some drainage holes in the bottom of the tray for the ice water to drip through.

For the drainage tray, a similar pattern will suffice, but is made just a little longer, say,  $11\frac{1}{2}$  ins., and the end flanges omitted, as these will not be wanted, the

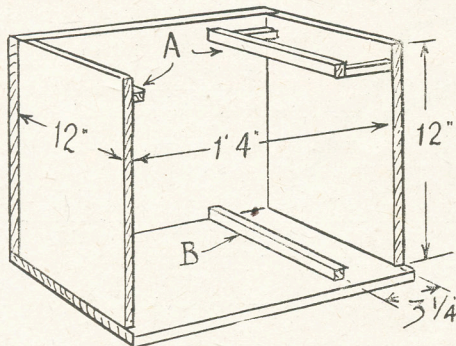


Fig. 1—General construction of box

tray resting on the bottom. It is bent to shape, exactly as the ice tray, and then both can be tried in position, to see they fit well in place, and are easily removable.

A lid of stout board is made, preferably from tongued and grooved wood, glued together. Make it of a size that will enable it to fit closely in the box, and rest upon the fillets, but do not overdo this fitting and make the lid difficult to fix on, or take off. Any

tugging or forcing to get the lid off might shake the milk bottle over.

Round the edges of the lid, strips of  $\frac{1}{2}$  in. by  $1\frac{1}{2}$  in. wood are glued and nailed, these strips overlapping the edges of the lid enough to cover the box. The detail sketch in Fig. 2 shows this. To the lid

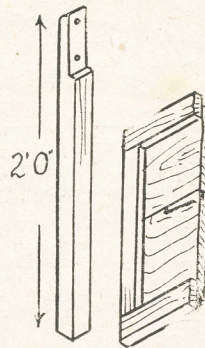


Fig. 2—Leg and lid strips

screw a knob or handle for lifting purposes. A metal handle would, perhaps, be as good as any one of the folding box variety, for example, as it would take up least room.

#### Raised on Legs

If the box is to stand on some support, it will do very well as it is, but if not, the addition of legs would prove a great advantage, saving a lot of stooping down

to get at the contents of the box. A simple pattern of leg is shown in Fig. 2, cut from  $1\frac{1}{2}$  in. square timber or thereabouts. Some 6 ins. of the top ends are reduced to half thickness, as shown, for screwing to the ends of the box. This completes the work of construction.

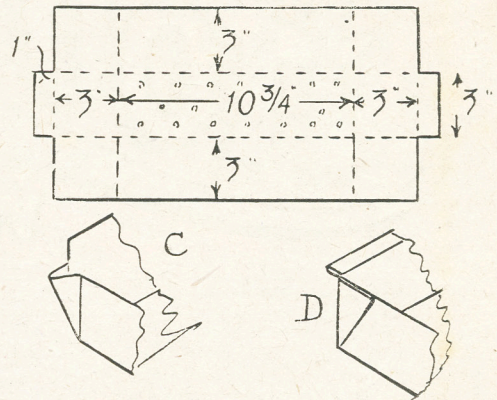


Fig. 3—Shape and corner joint of tray

The inside and outside should be given two coats of white paint, and then a finishing coat, either of glossy white or enamel. Take some care, when painting, to seal the corner joints as much as possible.

The ice is crushed and packed in the ice tray. It should, preferably, be replenished daily, and the draining tray emptied as becomes necessary. Beyond this little attention is necessary. (186)

## How to make a HECTOGRAPH

**I**F you are secretary to a club or committee or sometimes faced with the task of preparing, say, 40 or 50 copies of a letter, then a hectograph will prove a boon. It does not entail the use of a typewriter or stencils, and the apparatus is simple and inexpensive to make.

A hectograph is merely a gelatine pad upon which has been impressed the hand-written original of which additional copies are required. Although it is possible to buy a solution for making the graph and also a specially prepared ink, we will consider how to produce the whole outfit ourselves.

#### Materials for the Jelly

First we require a shallow tin dish—the lid of a biscuit tin would be ideal.

Now to prepare the gelatine composition, for which you will require:

- 1 oz. of gelatine.
- 1 oz. of brown (Demerara) sugar.
- 6 ozs. of glycerine.
- $2\frac{1}{2}$  ozs. of barium sulphate.

With the exception of the sugar, all these ingredients may be obtained from your chemist. (Incidentally, their total cost will be only about one-quarter of the commercial gelatine pad).

Cut the gelatine into small pieces and place in an old saucepan with three ounces of water, allowing it to soak for twelve hours or so. Add the glycerine, heat slowly over a low gas and then add the sugar. As soon as the sugar has dissolved, mix the whole thoroughly. This done, mix the barium sulphate with one ounce of water and add to the mixture in the saucepan, stirring well.

Place the lid of the biscuit tin on a perfectly level surface (this is important), and then pour in the composition mixture. Watch for any air bubbles and prick them if present. When the gelatine is set, the pad will be ready for use.

#### Home-made Ink

As already stated, hectograph ink may be bought, but here is the recipe for making your own. Ask your chemist to place in one bottle two drachms of methyl-violet aniline and two drachms of spirit. Add water sufficient to make one ounce of ink (or ask the chemist to add it for you). Shake the bottle well until the aniline has completely dissolved, and the ink will then be ready for use.

We are now all set to try a few trial copies. It is important to write the letter or circular on a smooth-surfaced

paper (such as cream or blue laid). Duplicating or typing papers and 'bond' papers do not give the best results.

#### In Use

As soon as the writing is dry, place the sheet, writing downwards, on to the gelatine pad. Rub the paper gently but firmly with a soft pad, being sure it does not slip while so doing. Leave the paper in place for not less than ten minutes. You should then carefully peel the paper off the gelatine pad from the corner, when you will see a clear impression of the original writing on the composition.

Take a few sheets of paper and press each one for a second or two over this impression and if all is well, you should have some excellent copies. You should be able to take 40 or 50 copies before the ink on the gelatine becomes exhausted.

After use, and in order to erase any writing from the pad, sponge it carefully with cold water and leave to drain. A few hours should be allowed to elapse before making another impression on the composition.

If you do not wash the jelly immediately the ink will sink in and the jelly will then have to be boiled, and the top skimmed off. (181)



# Some hints on the construction of various types of AQUARIUM AERATORS

If fish are kept in a suitably aerated tank there is no necessity for the water to be changed and a greater number of fish can be accommodated in the same volume of water. For a permanent aquarium the old and well-known rule which states that one gallon of water should be allowed for each inch of fish need not remain applicable when mechanical aeration is employed.

Where plants and the surface of the water in contact with the air form the only means of replenishing the oxygen used by the fish a four-gallon tank could only hold two 2in. fish, or a proportionately greater number of smaller fish, assuming the water is never changed. This can, of course, be quite satisfactory. Nevertheless, the opportunity of introducing more fish is one many may like to take.

## Types of Air Pump

The first requirement is an efficient air pump, and many different forms are practicable, four of the best-known being shown in Fig. 1.

Rotary blowers are cheaply obtainable from ex-service stores and can be operated from the mains with a suitable transformer. They deliver a very high volume of air, but at low pressure, which means that the aerator jets should be of large diameter and not too deep in the water. If the jets are small, or submerged deeply, the average rotary blower will not provide sufficient power.

Such a blower is shown at (A) in Fig. 1 and has a certain field of usefulness provided the foregoing is remembered. It will be found that any attempt to build up high air pressure with such a unit will fail.

## Piston Pumps

An efficient pump which will give ample pressure is shown at (B). The crank, driven from a motor through suitable reduction gearing, moves the piston backwards and forwards in the cylinder. Two valves are connected to

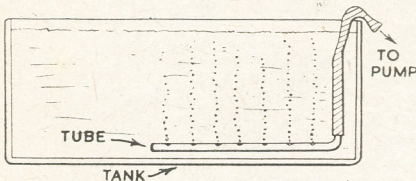


Fig. 2—Aerator jets

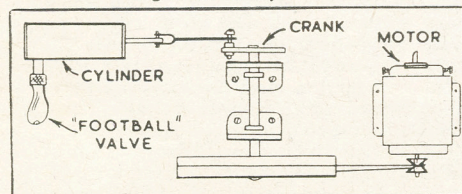


Fig. 3—Plan of a simple piston pump

the tubes leading from the cylinder so that the air is drawn in through one pipe and forced out through the other. The supply of air obtained will depend on the size of the cylinder and speed of rotation of the crank.

The aerator jets for such a pump can be very fine and at the bottom of the tank, thus giving the maximum opportunity for proper aeration of the water.

## Water Pumps

Where there is a plentiful supply of running water types of non-mechanical pumps can be used. That shown at (C) makes use of a long vertical pipe with a funnel-shaped top, into which water drips fairly rapidly. If a glass tube is used it will be seen that the drops pass downwards with large air-spaces between, this causing a continuous flow of air from the bottom of the tube. If the tube is long, sufficient pressure will be developed. The flow of water from the tap is not necessarily under pressure.

Where water under pressure is available the method shown in (D) can be used and occupies much less space. A strong jet of water is directed into a tube with a funnel-shaped top from a distance of about 1in. This carries many bubbles of air with the water coming from the lower pipe. The small tubes can be supported in a larger tube, holes for the entrance of air being left in the disc supporting the jet.

With both these methods the outflow will consist of both air and water. It is best to trap the water in a suitable tank through which the supply tube passes, the tank being airtight and fitted with a siphon so that it empties automatically.

## Aerator Jets

The easiest way to make these is to take a length of copper or brass tubing which can lie along the bottom of the tank and to close one end by flattening or soldering. A number of small holes can then be drilled along the tube, as illustrated in Fig. 2. A rubber tube connects the completed arrangement to

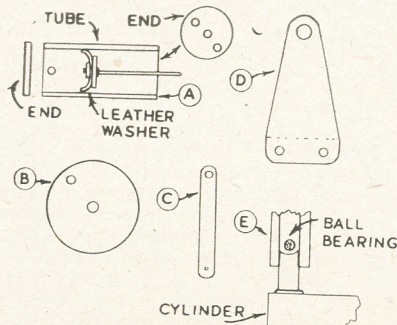


Fig. 4—Detail of the parts

the air pump.

Other arrangements will suggest themselves. A small 'rose' similar to that on a watering-can is suitable for use in a corner of the aquarium. The aerator should be made from some material which will not rust or otherwise contaminate the water.

## A Piston Pump

As this is generally the most satisfac-

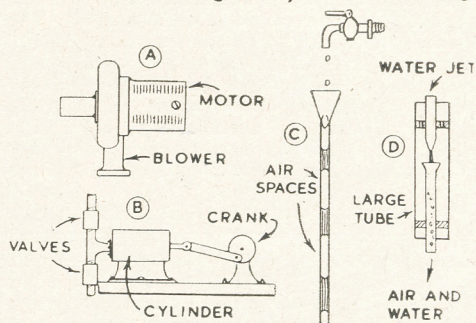


Fig. 1—Different types of air pumps

tory Fig. 3 shows how such a pump can be made up. An electric motor is shown for driving, and this, operated from the mains, is the only really practicable method, in view of the long periods of running which are necessary.

The motor drives the crank through a belt reduction drive, though gearing could be used if suitable parts are to hand. The axle is pivoted in two stout brackets, which may be bent up as shown in Fig. 4 (D). Washers or bushes soldered on prevent sideways movement of the axle.

## The Cylinder

The best size and length of this naturally depends to some extent upon the power of the motor, but something between about  $\frac{1}{2}$ in. to 1in. diameter and  $1\frac{1}{2}$ in. to 2 $\frac{1}{2}$ in. long is suitable. It can be made from brass tubing, with a disc soldered in place to close the end.

If an old cycle pump is available, this can be used, even if not made from metal. Here, the end will already be closed and suitably threaded for a football type valve, such as is used for inflating footballs from a tyre pump. A length of about 2ins. should be carefully sawn from the pump barrel at the connection end.

A section through the cylinder and piston is shown at (A) in Fig. 4. As the piston is withdrawn, air passes round the leather washer. When the piston is being forced inwards, however, the washer is expanded by the air against the walls of the cylinder, thus assuring that the air passes out through the hole at the end of the cylinder. The leather washer should not be a tight fit, and it



should be softened with lubricating oil if stiff.

The crank is made from a disc, shown at (B), with a small bolt to pivot the link or connecting rod. The diameter of the disc is such that the piston makes a good movement in the cylinder, yet does not foul either end. The link (C) is made from two pieces of fairly stout metal soldered together, the ends being opened so that one goes each side of the piston-rod, as seen in Fig. 3. To hold the piston-rod central in the cylinder, an end with air-holes is soldered on, as shown at (A).

### The Valve

If a piece of a cycle pump has been used the valve can be screwed into the end. If not, it will need to be soldered in a suitable hole either at the end of the cylinder, as in Fig. 3, or in the disc closing the tubing from which the cylinder is made. A suitable piece of rubber tubing can be pushed on the end of the valve to take the air to the aerator tubes.

If a valve is to be made, this can be

done as shown in Fig. 4 at (E). A piece of small-diameter copper or brass tubing is soldered upright in the end of the cylinder. Its upper end should be filed perfectly flat, then indented slightly with a countersink drill so as to form a seat upon which a ball bearing can rest to form an almost airtight valve. A tube of slightly larger diameter fits over the small tube, as shown, and the rubber tubing is finally pushed over the top end of this larger tube.

If the ball bearing is new (a rusty or worn one is useless) and a little care given to preparing the end of the tube on which it rests, this valve will function very well, especially if a spot of thick oil is put on the ball.

The whole pump should run easily and smoothly, and construction will be greatly facilitated if a few suitable parts from the well-known boys' toy are brought into use.

To even up the flow of air with a piston pump, and to avoid having to use two cylinders, a fairly large air-tank should be included in the supply pipe to the aerator. A large tin, soldered at the

joints, can be used. It will equal up the pulsations of air coming from the pump, giving out a steady pressure of air so that the aquarium jets do not start and stop with each movement of the piston.

The undesirability of keeping fish in an oxygen-starved state is too obvious to need mention, and it is much better to keep a smaller number of fish so that they have a plentiful supply of well-aerated water. If the fish rise to the surface and breathe the water there, showing no sign of going deeper, this shows the oxygen in the water is becoming exhausted.

The old method of keeping goldfish, changing the water once or twice daily, is the least satisfactory method. By using a larger aquarium, aerating the water thoroughly, and making up a 'natural' setting of weed, sand, stones, and so on, the necessity for changing the water is removed. Small fish caught from streams and brooks can be kept with perfect success, and a final refinement, well worth while, is to carry buckets of brook-water to fill the tank. Tap-water is not normally suitable. (163)

## The camper and hiker should know these hints for FIRE LIGHTING IN RAIN

**E**VEN the most enthusiastic camper will admit that it sometimes rains in camp; and that it not only rains, but it pours! Under these conditions, getting a fire going is rather a trial, but providing you can light a fire and keep it going under normal conditions, the following hints may prove useful when you are called upon to light a fire in the rain.

### Cooking Coverage

The main point to remember is that once a fire has been got going, the cooking utensils will keep the rain off, whilst the heat of the flames will soon dry damp fuel. If you are in a large camp you will probably have a cooking shelter as well as a Primus or two, but I am writing for the benefit of those fellows in a small hike tent.

A fire can be lit on the leeward side of a tree, i.e. the side away from the wind and driving rain (Fig. 1), but great care must be taken not to make any burn on the bark. Many campers know the old trick of starting a fire in a frying pan (Fig. 5). It will not hurt the pan, but it will harm a tent—especially a midget one if you try to start the fire *inside* the tent.

### Candle Starter

A favourite method employed by the writer of these notes is to cut up a half of a candle into about four and arrange the pieces in the plate of a Gilwell or similar cooker (Fig. 4). Light all the little pieces of candle and over the edges of the plate lay thin twigs, followed by thicker stuff. When the lot is built up, take it out of the tent, and place it under the billys, etc.

To avoid accidents, the whole lot

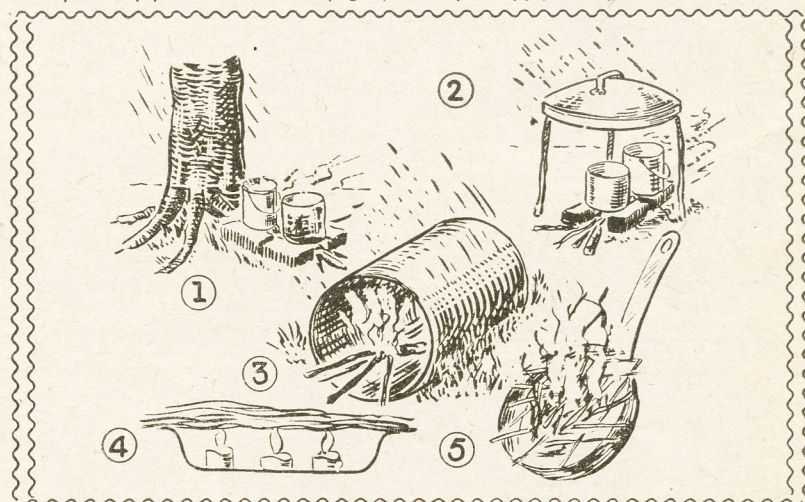
is taken out of the tent immediately the candles are lit and, of course, as soon as the wood is burning, the tin plate is removed. A freak method, no doubt, but one that is justified when it is raining like the very dickens.

At most regular camping grounds an array of dustbins may be found. You can lay an empty one on its side (Fig. 3)

matches before you start off. This is easily done by melting an old candle down in a tin, and dipping the matches in it, afterwards laying them on a sheet of newspaper for the wax to solidify.

### Ensure Dry Wood

Another point to remember, is to keep a supply of dry wood under cover,



and start the fire in that. Alternatively the lid, supported on three sticks, will form a 'roof' to keep off the rain (Fig. 2). As you know, many country villages do not have a dustman to call on them, and have to dump their old iron, etc., in a recognised place. From such a dump you can often scrounge an old bath, or some such article which you can use as the basis of a camp stove.

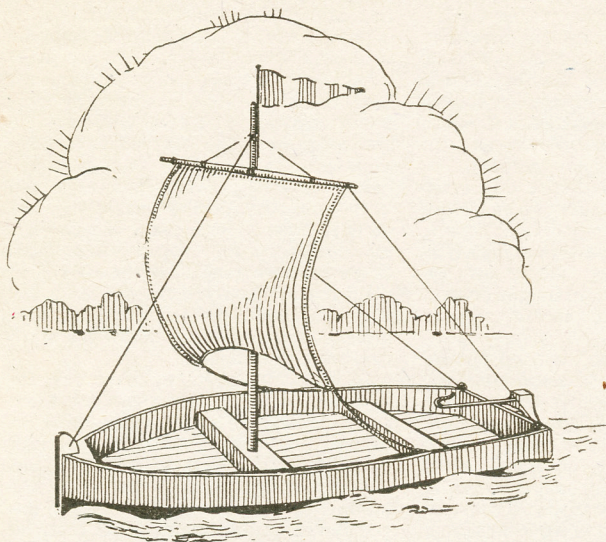
Do not forget to waterproof your

especially that small stuff generally called 'punk'. The writer is by no means a perfect woodcraftsman but he has never yet failed to get a fire going even under the most adverse conditions. It needs some patience at times! Have you ever practised that 1910-ish Boy Scout old stunt of lighting a fire in a puddle?

Lastly, do not be tempted to use petrol or paraffin oil on the fire. Accidents sometimes happen! (156)



# Any youngster would get pleasure from this SMALL SAILING BOAT



**T**HE type of sailing yacht shown on this page is always popular with the youngsters who look forward to a seaside holiday.

The outstanding feature of this toy is that it is of the simplest construction, and could easily be made in an evening, with, of course, a little extra time allowed for the paint to dry and harden.

The length of the boat is 12ins., and its width or beam 4½ins. Although a bowsprit is not shown in our model, one could easily be added to give a little more character. Another little addition, too, could be made if it were found that the boat had a tendency to turn turtle in the water when the mast and sail are erected and a full breeze blowing. This addition would be a piece of, say, ½in. wood about ½in. or ¾in. wide nailed on the hull to form a heel. It would, of course, be put centrally along the underside of the thick hull piece and nailed or screwed from inside. The glue suggested for fixing the several parts must be the waterproof variety which can be purchased these days.

## The Hull

The hull is cut from a piece of 1in. thick deal, free from knots and with straight grain. Set out one half of the

shape direct on the wood—a piece 12½ins. by 5ins. being adequate. The shape, being so simple in outline, can well be got from that shown in Fig. 1.

A centre line should first be drawn across the wood, as shown. Trace off this half outline and draw in the centre line on this tracing before turning over the tracing to complete the shape, this latter process being helped by the use of a piece of carbon paper. Cut round the outline with a fretsaw and

clean up with glasspaper.

Next cut a little notch in the bow or pointed end for the piece (A). This piece is 2½ins. long by ½in. wide and ½in. thick. The stern board (B) will be 3ins. long by 1in. wide by ½in. thick and it will rest in a shallow rebate cut in the hull, as seen in Figs. 2 and 3.

Next there are the cross pieces (C) and (D) (Fig. 2) and each is made up of two thicknesses of ½in. pinned together. The lengths of these pieces can be calculated from the plan (Fig. 1) after the measurements shown are set out on the hull piece. Clean off the ends of the pieces level with the hull sides so that the correct curve is preserved throughout.

## The Sides

For the sides of the boat take the measurements direct from the already made-up hull, allowing a trifle in length for chamfering at the bow and fitting to the stern. Thin wood should be used for the sides, and from the side view, above the plan, in Fig. 1 it can be seen

how the sides taper slightly from bow to stern—from 1½ins. to 1¼ins. This depth is sufficient to allow a lap of ½in. on to the thick heel piece. This is seen by the dotted line in the above diagram which indicates the amount of lap throughout its length.

Bore quite small holes in the thin wood at the bow and stern, and after coating the top part of the hull with glue, bend it round and tack it to the uprights at bow and stern with fine ½in. brass fret pins. A good idea to hold the sides well in place, and in close contact with the hull, is to put over a number of elastic bands at intervals along the sides until the glue has thoroughly hardened.

## Bow Stiffener

A general clean up should now be made, and the sides and hull gone over with fine glasspaper. To strengthen the fixing between the sides and the bow upright glue in the shaped piece (E), as seen in Fig. 2. The actual size of the piece is marked out direct from the model. See the actual piece fixed in place, Fig. 3.

There is a stern post next to be fixed, as (F) in Fig. 4. It should be 1½ins. long, ½in. wide and ½in. thick, glued and pinned firmly in place.

The whole boat should now be coated with red lead paint and afterwards rubbed down with fine glasspaper. Follow with two coats of oil paint brushed well into the grain of the wood and into the joints along the sides and back.

For the rudder (G) a piece of ½in. wood about 2½ins. long is shaped, as (Continued foot of page 216)

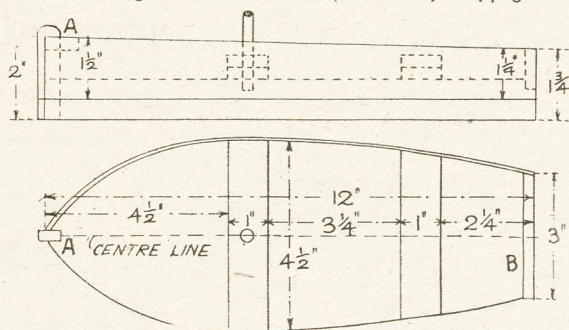


Fig. 1—Side view and plan with dimensions

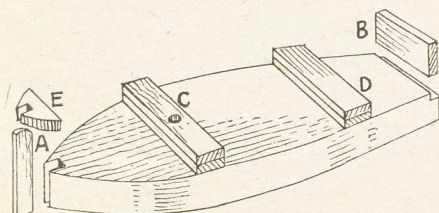


Fig. 2—Showing details of construction

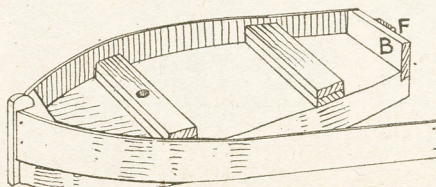


Fig. 3—How sides are fitted

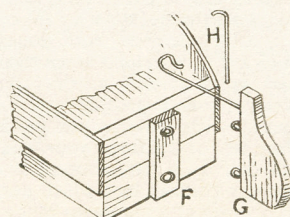


Fig. 4—Stern and rudder



# Even with a cheap camera the amateur can undertake NATURE PHOTOGRAPHY



A simple suitable 'hide'

If you are looking for a hobby with plenty of thrills and adventure attached to it, nature photography should be right up your street. Strictly speaking, this branch of camera-craft covers a host of subjects—trees, flowers, butterflies and so forth—but at the moment let us think in terms of animals and birds.

For many years past, hunting with a camera has been one of the writer's chief hobbies. It is a thrilling moment, setting out with new film in your camera in the hope of outwitting the cunning of the wild folk. Sometimes the trek homewards is with the whole film used up—and sometimes without having opened the shutter at all! You never can tell what the day (or night) will bring forth.

## With a Simple Camera

If you are thinking the hobby is only for those who can sport super cameras of the £100 breed, be assured that all the photographs reproduced here were taken with a modest folding camera having an  $f4.5$  lens and shutter speeds up to  $\frac{1}{100}$ th sec. The camera is mounted on a light-weight metal tripod and sometimes use is made of a second-hand telephoto lens which cost £2.

A telephoto lens is a great asset. It enables you to either (a) obtain a larger image on the negative, or (b) operate at a greater distance from your subject. Both are very helpful when dealing with such wary animals as the fox, for instance. Even if your camera has a fixed focus (which prevents you getting closer than 6ft. or so from your quarry) you can still do a fair amount of work by fitting a portrait lens which permits you to operate at a minimum range of about 3ft.

Actually, the author has taken a good badger study by flash-light without using supplementary lenses, but it should be remembered that Brock is a fairly large animal. In any case, you should always use the fastest and finest grained film you can obtain so the negative will give good enlargements.

To begin with you cannot do better than concentrate on water birds. Most of these—grebes, moorhens, coots, swans, etc.—are quite sizeable and often oblige by remaining motionless or swimming leisurely on a straight course, thereby making high shutter speeds unnecessary.

A 'hide' is essential.

It need not be elaborate, but it must screen you completely from your quarry. After experimenting with several home-made models, one of the most successful was made by using three 7ft. saplings draped with sackings after the style



The Skylark's Nest

of an Indian wig-wam.

In order to maintain all-round observation you should cut two small flaps in each of the three sides—one aperture for the camera lens and the other for use as a peep-hole. Camouflage the hide to blend with its background and do not forget to install a seat or stool of some kind, as you may have to spend three or four hours in ceaseless vigil!

It is a good plan to set the hide in position two or three days before you go

into action, if possible, so the animal or bird becomes accustomed to it. Another ruse often employed is for two people to enter the hide and for one to leave almost immediately. Not being good at arithmetic the wild folk who may be watching think the hide to have been emptied!

Photographs of nests and eggs will keep you busy during the spring and early summer. Here, again, the portrait lens comes in handy if you cannot focus down to close range. If the nest is in deep shadow, and you are not using any flash-light gear, get a friend to hold a piece of mirror so it deflects the sun's rays on to the subject.

As far as possible, tie back any obstructing twigs rather than cut them away, as this may cause the bird to desert the nest. Where practical, photograph the nest from above and slightly off-centre, as this will add interest to the picture by bringing in the graceful curves of the side of the nest.

Baits can be used to lure an animal or bird into your camera's field of focus. Badgers are partial to honey and syrup, and Oliver Pike has proved that smoked haddock of ancient vintage tickles their palate! Foxes will investigate almost any kind of flesh food, from a fowl's head to stale fish. But only really fresh fish will interest the otter.

One last thought: patience is more than a virtue—it is a vital necessity where wild life photography is concerned.

It is, of course, equally vital to know the capacity of your own camera. If you have got a new one, try it out on a series of general subjects in order

to accustom yourself to the "feel" of it, and also to know what actual shots it will take.

Then you can concentrate of your nature studies and enjoy the thrill of specialisation in this fascinating subject.

(179)



Eggs of the Blackbird



Little Grebe approaching nest



A snap of the Badger



# For pleasure and easy carriage on camp or holiday

## MAKE PAN PIPES

**T**AKING musical instruments to camp is a bit of a bother. Piano-accordions are fine for filling up a rucksack! Guitars, violins, and the like, are rather fragile and likely to get spoilt by the damp. Trombones, harpsichords, etc., are also ruled out, so that nothing seems left but mouth-organs and 'musical submarines'.

Here, however, is how to make several home-made instruments which are not merely 'stunts', but are capable of dispensing sweet music. You can buy a tin whistle cheaply at most toy shops, but it is greater fun to make your own in more 'woodcrafty' material.

### A Willow Whistle

In the early summer or late spring, cut a piece of willow or green sycamore, about 5ins. long. It should be fairly thin and must be smooth and straight. One end is cut square, but the other is cut at a slant to form a mouthpiece (a). Make a notch above the mouthpiece, as shown in the drawing (b), and about 1in. from the other, square, end, cut a ring round the bark only.

Now soak the wood well in water, and tap the bark with the handle of a pen-knife, up and down, round and round, for some time, moistening occasionally, and taking care not to bruise the bark. You should then be able to slip the tube of bark above the cut-off from the wooden core (c).

Next, wipe off the sticky sap and on the wooden core enlarge the notch already made by extending it not deeper, but lengthways towards the square end. See diagram (c). Cut a very shallow channel, about  $\frac{3}{16}$ in. wide, along the centre between the mouthpiece and the groove just made. (Compare with detail at (f) of the bamboo pipe). Then replace the bark tube in its original position. Take a deep breath and blow.

### Altering the Note

A shrill clear note should be heard, but if the results are not pleasing, better results will be obtained if you (a) enlarge the notch or (b) enlarge the air channel cut in the lip.

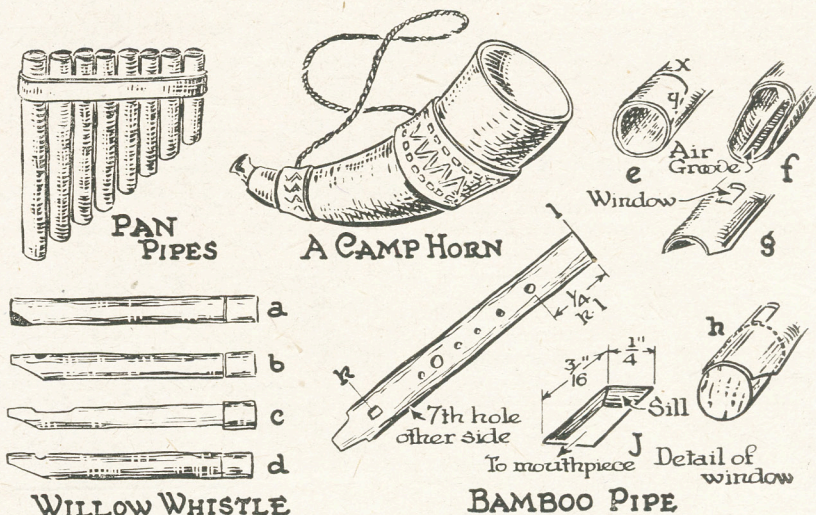
When you have produced a perfect single note whistle you can tackle a similar instrument which will play simple tunes. To do this, take a longer twig, about 9ins. long. Proceed as before, but before removing the bark,

cut a series of holes in the side. The exact position of these is more fully explained in the notes on bamboo pipes which follow. The groove must be carried down past all the finger holes. The instrument will not stand knocking about.

### Bamboo Pipes

These are much stronger and are genuine instruments. You can form a

A note will be heard. If you wish to play with others, the pipes must, obviously, be in tune with each other. The usual key-note for a pipe of this type is D. (Get the note from a tuning fork or violinist's pipes—not from a piano, which might be out of tune). The shorter the pipe, the higher the note. You cannot add bits to the pipe, but if the pipe is playing lower than D, saw little pieces off until it does sound



good camp orchestra with them as they can be made in all pitches, from shrill piccolo effects to organ-like groans. Take a piece of sound bamboo about 1in. diameter and 1ft. long.

### Clean Bamboo

It must be uncracked and if joints cannot be avoided, have them as near the centre as possible. Bore out the tube so that it is clean throughout. About  $\frac{1}{4}$ in. from one end cut about half-way through with a hacksaw (x). Then saw from the other way (y), so making a mouthpiece, as in Fig. f. The lip remaining is about one-third the original circumference.

Well beyond the lip, and in the centre of the pipe, cut a 'window',  $\frac{1}{4}$ in. wide and  $\frac{3}{16}$ in. long, with a penknife and small fretwork file if you have one. The far side (i.e. the one away from the mouthpiece) is bevelled back to form a 'sill' (see j).

Then cut an air groove leading from the window to the top of the lip. This is the width of the window, and rather less than  $\frac{1}{16}$ in. deep. It must be straight floored, not hollowed (f).

Now place a well-fitting cork in the mouthpiece, so that it reaches to the near edge of the window (n). Cut the cork to conform to the mouthpiece and blow.

D (about  $\frac{1}{2}$ in. equals a semi-tone, so do not saw too much off at a time).

Lastly, you bore the seven finger holes. The lowest is, from the bottom, one quarter the distance of the pipe between the centre of the window and the end. The larger the hole, the higher the tone. Make it fairly small and by twisting the blade of a penknife in it, or, better still, a four-square rimer bit sold for the purpose, enlarge it.

Keep testing until you hear E (the next note). The holes are  $\frac{1}{4}$ in. apart, the seventh being placed underneath, so the thumb will cover it easily. The holes are not necessarily the same size, and whilst tuning, any notes below the one in question are left 'open'.

### Camp Horn

A camp horn can easily be made from a bullock's horn cleaned out and fitted with a bugle mouthpiece. As, however, we have had an article on handicraft in bone, we will refer readers to this article for full details.

Most readers will have tried that stunt of blowing across and into a tube so as to get a musical note. The longer the tube, the deeper the note. If several of such tubes, graduated by experiment, are bound together in a line, as in the diagram, we get Pan Pipes—a very ancient instrument. (159)

When answering any advertisements in these pages it will be worth mentioning you saw them in *Hobbies Weekly*.



# Little things which make a big difference are MODEL SHIP FITTINGS

**O**N model galleons, etc., upwards of two dozen blocks or 'dead-eyes' are required. These can be purchased, but for many reasons the model maker often prefers to do the job himself. Even with a lathe, this is a tedious business, whilst it is most unsatisfactory to cut slices from a common wooden dowel, as the grain is very coarse and the finished article fragile.

Again, the groove around the block is difficult to file neatly. Since many articles hitherto made of wood are now made of plastic media, the writer devised the following original way of making deadeyes.

## Deadeyes

A good average size for a deadeye is  $\frac{3}{8}$  in. diameter, and  $\frac{3}{16}$  in. thick (Fig. 3), but the following dimensions can be modified if desired. The deadeyes should be proportioned to the scale of the ship model. First, a mould must be constructed (Fig. 1). Take three strips of  $\frac{1}{16}$  in. plywood, plastic or metal, 1 in. wide, and as long as desired, and temporarily clamping them together, drill fine holes along the centre,  $\frac{3}{16}$  in. apart.

Separate the pieces, and in the top and bottom pieces, using as centres the holes just drilled, drill  $\frac{3}{16}$  in. diameter holes, whilst in the centre piece,  $\frac{1}{16}$  in. diameter holes. These holes must be perfectly smooth and clean, with no whiskery edges. Again assemble the pieces and glue them together. When dry, cut along the centre line with a fine fretsaw. Any odd piece of wood will do for a base. At each end, a fence is erected to hold the mould in position.

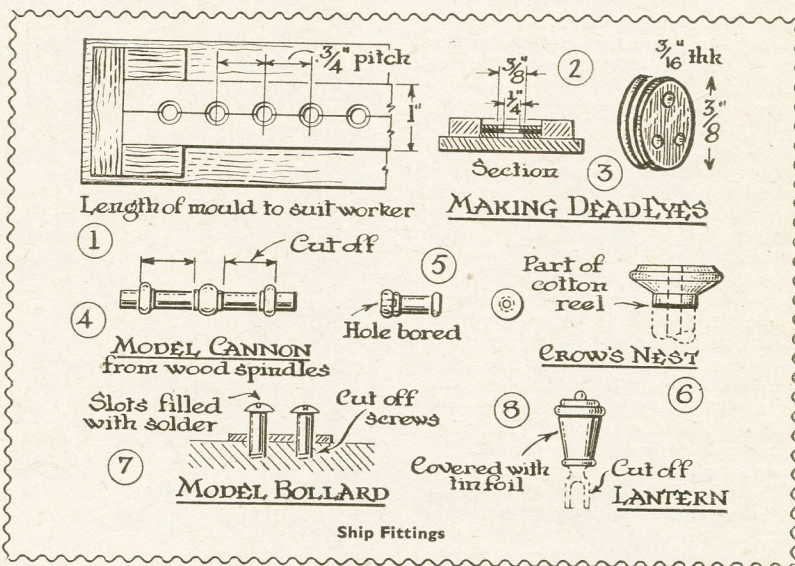
There are various plastic media the worker can try out, from trade preparations to a mixture of rice-flour and water, which has been simmered over a low fire for at least an hour, with just sufficient water to prevent it from burning. The two halves of the mould

are held in the base, and the plastic material pressed in.

It is as well to turn the mould over, to make sure that there is sufficient material on the other side. The three holes on the block can be pricked with a nail. After a few hours the two halves of the mould can be separated and a fresh batch put in. These self-drying media should be left for a few days to ensure that they are properly hardened.

## Crowsnests

A crow'snest is easily fashioned from a certain type of cotton-reel, cut down and rounded off (Fig. 6). A bollard, as used on larger ship models, can be made from two large round-headed screws, with the slots afterwards filled in with solder (Fig. 7). A wooden base is made, having holes just large enough to clear the screws.



## Guns

The sides of a galleon bristle with ordnance. Fig. 4 shows how the worker who does not own a lathe can devise cannon from small woodworkers' supply shops. The finished cannons are about 1 in. long. A hole is drilled to represent the bore of the gun, and the whole painted yellow (Fig. 5).

If the hull is solid, the screws may be used full length, but otherwise they may be cut off, and holes previously drilled for them.

A lantern on the prow of the ship model adds a touch of realism. This can be improvised from a drop-handle. The main portion is covered with tin-foil to represent glass, whilst lines are painted to indicate the bars (Fig. 8). (154)

## Sailing Boat—(Continued from page 213)

shown in Fig. 4 and fitted with two small brass eyes. Two similar eyes in the stern post (F) are inserted so that they come under those in the rudder. A piece of stout wire (as (H) in Fig. 4) is dropped from above to hold the rudder in place so it can turn readily from side to side.

The rudder is controlled realistically from the stern by a tiller arm made from wire which is run into the top of the rudder and bent up to form a handle. The wire must be filed to a point to fit and be driven into the hole in the stern of the rudder.

A hole must now be bored about  $\frac{1}{16}$  in. diameter in the foremost cross piece in the boat to take the mast which is shaped up from a length of  $\frac{1}{16}$  in. round

rod. The length of the mast is about 8 ins. The spar is about 5 ins. long and tapers each way from the centre, as shown. A piece of  $\frac{3}{16}$  in. rod is suitable for the spar which is lashed to the mast with fine thread.

The size of the sail should be gauged from the mast and spar when temporarily put together. It should take the form shown in our sketch illustration.

Two brass eyes are run in to either the stern board or the rear cross board behind the mast. To these the sail cords are tied and carried up to the tips of the spar and the end cords to the sails are also fastened off to the eyes. The sail itself should be of lightweight material with the edges turned over and oversewn.

If a bowsprit is to be fitted it should run alongside the projecting top of

board (A) and be fastened to piece (E). From here it should run back to the mast cross rail where it could be pointed and run into a hole to make a rigid fastening. The bowsprit should be of  $\frac{3}{16}$  in. rod and should taper to the bow with a cord attached to its tip running to the masthead in a similar manner to that shown in the sketch.

Finally a little coloured flag or pennant should be fixed to the top of the mast or to a short length of wire and bound with thread to the mast. The mast and spar and bowsprit, if any, should have two coats of varnish. The upper sides of the hull would look well if painted white, and that portion below the waterline red or green. Inside the boat should be light brown and finished well with the varnish to make a good watertight job.



# Build an insectarium so you can KEEP LIVE BUTTERFLIES

**H**ERE is a fascinating summer hobby which is also quite out of the ordinary. There are over 50 varieties of butterflies which can be called native to Great Britain, and some of these—if not all—are sure to be flying near your home this summer.

Some people will be catching them, killing them and mounting their gorgeous little bodies on a pin in a glass case; but keeping them alive all summer in an insectarium constructed as described here is much more interesting.

## The Box Container

The main part of the insectarium is a large wooden box. Butterflies do not fly in a straight line like birds, but dodge up and down and from side to side, so that the larger the box the better. Too deep a box should not be chosen, however, or your little pets will hide out of your view.

Captive butterflies soon cease trying to escape and spend more time at rest, or walking, than in flight—so that a box 2ft. by 1½ft. by 1½ft. will serve quite well if nothing larger is available.

Such a box (or several boxes to be combined to make one large box) can often be bought very cheaply at your local greengrocer's or grocer's shop.

## Glass and Zinc Front

Place the box on one of its sides as illustrated. The front (which was the open top) is then filled in with glass and perforated zinc or close mesh wire netting. It is important that there should be good ventilation, but care should be taken to leave no sharp edges inside the insectarium, or your delicate captives may rip their wings. Folding the edges under in the manner of hemming the edge of cloth, or covering them with wooden strips are both tidy and efficient ways.

The glass observation panel (or panels if the insectarium is large) is held in place by slots, so the glass may be slid up or removed altogether as required. The grooved edge of tongued and grooved

board may be used to advantage, or a sandwich made of three thin boards.

At convenient intervals in the back and sides of the insectarium, round holes large enough to permit the entry of a hand should be cut, and covers—as shown in the illustration—cut out from plywood or other thin wood.

The bottom of the insectarium may be strewn with pebbles, pieces of dry wood or sand if desired. Nothing wet or sappy should be put in, or it will become mildewed or fungus-covered, and may affect the health of the butterflies.

A coat of paint will improve the appearance of the insectarium. A light green or cream inside will show off your captives to good advantage. But do not forget to allow time for harmful odours to disappear before beginning your living collection.

Some flowers are much more attractive to butterflies than others. When catching your specimens, you will soon see what blooms to pick for your insectarium. They can be put in small-topped jars—or better still stuck through holes punched in a metal cap as fitted on many jam jars. On no account should any large surface of water be left bare. In this small world, butterflies will not have so much chance of avoiding such hazards as in the open.

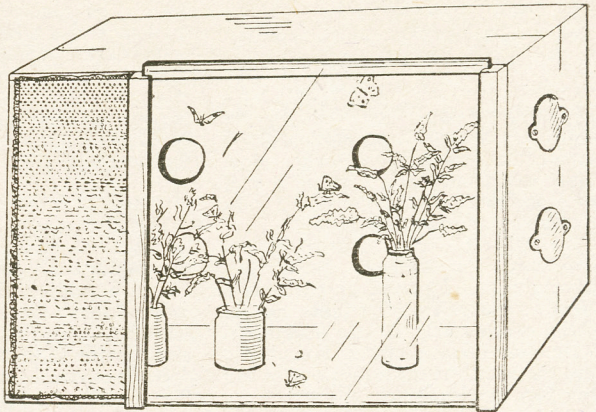
## Change Needed

Flowers should be changed as frequently as possible, and at least once a day, and should be provided in amounts according to the number of captives. You will be fascinated to watch them feed by unrolling their long tongues and sipping the nectar from the depths of the blossoms.

The butterflies should be caught as near to your home as possible. Travelling any distance may harm them. A net bag held open by a wire loop stuck into the end of a bamboo stick is easily made if you do not wish to buy one. Little boxes with a few holes punched in them—match boxes if nothing larger is available—will serve as temporary, individual carrying cases for your specimens.

Great care should be taken in transferring them from the net to these boxes. The best way to pick up a butterfly is to take hold of the wings firmly and gently when they are together above the little body. Remember how fragile they are.

Butterflies are sun-loving insects. If you keep them so that they are always in the shade, they will become jaded, but



too much sun through the glass will make the interior like an oven. A few hours sunshine each day is the ideal and a suitable site should be chosen with this aim in view.

## The Life Cycle

If you wish you may use your insectarium to follow the butterfly's life cycle right through. When keeping butterflies you will often find that some of them—particularly new arrivals—lay eggs. These will hatch out into tiny grubs if they are left undisturbed, and will grow into caterpillars if you can provide the right food.

As they will probably starve if you cannot provide the right kind of leaf, it is better to find them partially grown, for then you will know the particular kind of foliage they favour as food—and also their size will prevent them from escaping through a crack or the ventilation gauze.

Some are worth keeping because of their strange appearance, and all are interesting to watch as they wind themselves about with a cobweb-like secretion and are finally hidden by the chrysalis they have made.

## Books of Reference

Reference to your local free library will give you more information if you are interested in what kind of butterfly to expect from a particular caterpillar. Of course it may be the caterpillar of a moth, in which case it is perhaps best avoided, as being likely to hide during the daylight hours.

You may also be able to find out what kind of flowers are the best food bearers for your particular captives, and also their names. Such knowledge will add to your enjoyment. Painted lady, red admiral, peacock and tortoiseshell are names of some of those you are likely to catch and which are particularly vivid specimens . . . and which will cause admiration in all who see them.

## A Chemistry Hint

**S**OMETIMES your chemistry soil lamp runs short of oil, and the wick is unable to reach the oil. To overcome this, just add some water to the oil. Since the oil is lighter, it will rise to the top, so the wick is able to reach it. Remember not to add too much water, because the wick might reach it.



# Aspiring fishermen should read these notes on ANGLING FOR BEGINNERS

**A**NGLING is one of the most popular of out-door pastimes; there are well over two million anglers in this country and still their numbers increase. Well, it is jolly fun and very interesting to go a-fishing in the summer holidays and week-ends. Most rivers, lakes, and ponds contain fish of sorts, and there is seldom much difficulty in obtaining a little sport.

Generally speaking, there are no 'free' waters in England. Mostly you have to obtain a permit or purchase a ticket. Many angling clubs control stretches of water, and issue tickets at a cheap rate to non-members. Frequently, such can be had at the riverside inns and from local tackle dealers.

We would recommend the beginner to join an angling club, where he will have the advantage of meeting experienced anglers glad enough to show one the tricks of the craft. He will also have the privilege of fishing in the club's private waters.

Remember, you will need a licence, cost of which varies in different waters and may be obtained from the distributors—usually the tackle dealers. Everywhere in English and Welsh districts a licence must be held for salmon and trout fishing. Even if you have permission to fish in strictly private water a licence is still required.

## Equipment

The beginner will require a light cane rod of from 10ft. to 12ft. long, fitted with stand-off rings and reel fittings. A rod with cane butt and middle joint, and a greenheart top, is excellent for all kinds of 'coarse' fishing, i.e. roach, barbel, bream, chub, dace, carp, tench, gudgeon, rudd, and bleak, not forgetting the perch.

The reel may be of the Nottingham pattern, with centre-pin action, carrying 40yds. of undressed silk line or nylon

line. You require gut-casts or nylon casts to connect reel-line to the hook-length; these should be of 3x strength. You can have a 1yd. cast, and to this attach the hook which is mounted on a short piece of nylon or gut, from 10 to 12ins. Or you can buy a 1yd. cast already mounted with a hook.

## Short-hook Advantages

The advantage of using a short hook-length is that if the hook gets fast in a snag under water and you have to break away, you will most probably save the cast and thus only need another hook to carry on. Hooks to short gut are much cheaper than those tied to a long cast.

Floats of various sizes must be stocked.

For canals and quiet waters light quills are advised. But for fast heavy water and deep streams, you need a bigger float, as a goose-quill. The goose-quill, porcupine quill, crow quill and those floats made of quill and cork are mostly used for bottom fishing. Hooks vary in size from No. 3 to No. 16. For general use No. 10 and No. 12 are most suitable. Those hooks known as Crystal are the best for all-round angling.

Sundries include float caps of quill or rubber, to hold the line to the float; split-shot for weighting the cast; knife; scissors (small); pliers for pinching shot on cast; Some anglers use their teeth for this job, but we would say 'do not'; teeth are easily broken! Then you want a bag or basket and a landing-net complete with a fairly long handle.

## General Hints

Always see your tackle is in good order. Take a supply of spare casts and hooks with you. Do not forget your baits, and see you have ample supplies. Before setting out, check over the items of your outfit; leave nothing at home that you may want. Do not forget your permit and licence.

Always approach the river bank carefully, fish are easily scared off. Do not stamp about on bank or in boat. Before commencing to fish, place everything to hand, also put the landing-net ready.

Grease your line with Vaseline or other preparation sold by tackle people, in order to keep it afloat on the surface. You have less trouble then when striking, as you get a 'bite' from the fish—a line that sinks and sags low in the water retards quick striking.

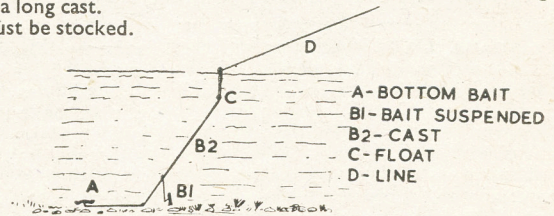
Rub a bit of Vaseline on the ferrules of a new rod to prevent the joints from sticking when you fix up the rod.

Observe the good angler's code of manners. Do not trespass, but be quite sure you are in order before com-

mencing to fish. Do not omit to shut all field gates! Do not leave litter on the bank! Do not damage banks or trample in crops! Do not be awkward if the water-bailiff asks to see your licence or the fish you have caught.

Most anglers nowadays take a keep-net and put all their catch in it to keep the fish alive until end of day, when they carefully return all those they do not want. All undersized ones should be returned after unhooking, and not put in the keep-net. On the back of your licence you will find particulars of the size limits of the various species.

You can carry a rule for measuring



Showing the method of using two hooks

them, or you can cut notches in the landing-net handle giving lengths—say, a notch denoting 6ins., another 7, 8, and so on up to 12ins. This simplifies it—you take your captive out of the landing-net, and then measure it against the notches on the handle; if undersize you put it back into the water.

## Popular Fish

Roach are very popular with float-fishers, for they are well distributed in river, canal, pond, lake, mere, and reservoir. They are grand fish and provide lots of sport. Use fine tackle and a No. 12 hook. Baits include pastes, maggots, red worms, dew worms, creed wheat, hemp-seed, caddis grubs, silk weed, etc.

Stale bread soaked and mashed up with a little bran or meal, or dried bread powdered up small, is a likely ground-bait. Throw a little in from time to time at the spot where you are fishing. Adjust the float so the baited hook travels down just off the bottom of the river. Roach swim in shoals and when you find a good spot where they are located, you should have some fun. The ground-bait will keep them nosing around.

Dace are sportive fellows, found on shallows, in weir pools, and mill-tails. Gravel places are to their liking. They are gregarious and often bite freely. Caddis grubs are good baits, in summer, or maggots. Red worms after a flood are killing. Trot your baited hook down the 'swim', letting it travel without hindrance, paying out line from the reel. Throw in a few maggots occasionally as ground-bait.

(Continued foot of page 219)

## Trellis Work

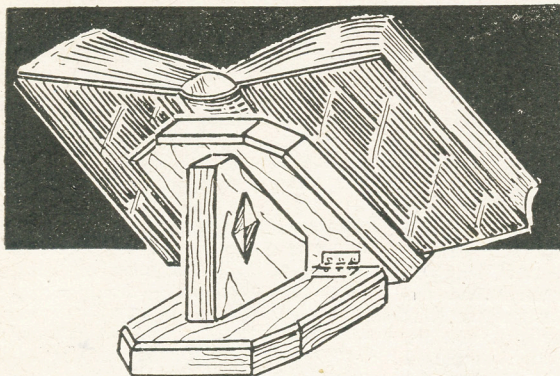
**W**HEN making trellis work with laths, a good idea is to cut a piece of wood the width you require the laths to be apart. This saves a great deal of measuring, and proves to be much more accurate.

## Wood Made White

**W**HEN you have finished with a cycle outfit, keep what is left of the french chalk because when it is gently rubbed on to plywood after it has been glass-papered, you will find it will come up with a white smooth finish.



# Here is a simple novelty in wood—a practical BOOK END AND REST



**A** GLANCE at the illustration will show the dual purpose of this novel appliance, which is made, of course, in pairs. Oak is a very good wood to use. To avoid ambiguity, the instructions refer to the making of one end.

The base is a piece  $4\frac{1}{2}$  ins. by 4 ins. by  $\frac{1}{2}$  in. The edges can be chamfered, the corners cut off, as shown. At  $1\frac{3}{8}$  ins. from one end a hole is drilled on the centre line to take a screw. This should be well countersunk. Note particularly that the fore edge is very

slightly undercut, the purpose of which will soon be apparent. It will be of great assistance if a sheet of iron or lead is screwed on the bottom and covered with baize to protect polished surfaces.

The upright piece is 6 ins. by 4 ins. by  $\frac{1}{2}$  in., its edge and corners being treated similarly to those on the base. It is hinged neatly

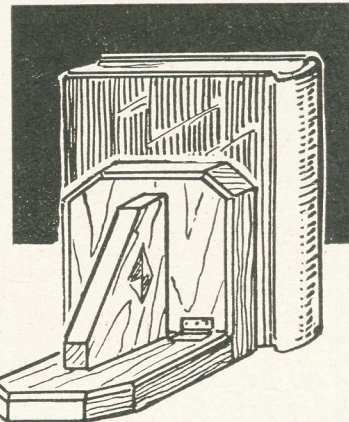
to the base. Along its lower edge a strip of brass, 4 ins. by 2 ins., as thin as is compatible with stiffness, is screwed, to serve as a ledge for books.

The bracket piece is now cut. This is  $2\frac{3}{4}$  ins. wide at the base and  $4\frac{1}{2}$  ins. high. The vertical and horizontal parts are each  $\frac{1}{2}$  in. long. Note that the screw hole is not in the centre. It is  $1\frac{3}{8}$  ins. from one end, as shown. This bracket can be decorated with a diamond piece if preferred.

Upon assembling, it will be found that when the bracket is reversed (the tension of the screw being adjusted for

this) the upright has to move a little outwards, otherwise the bracket would be wedged tightly. Hence the undercut part of the base.

When reversed the upright falls back



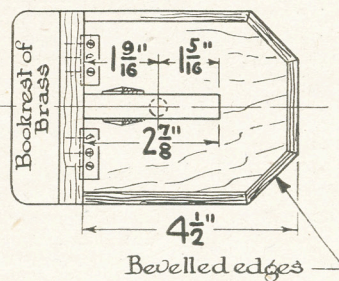
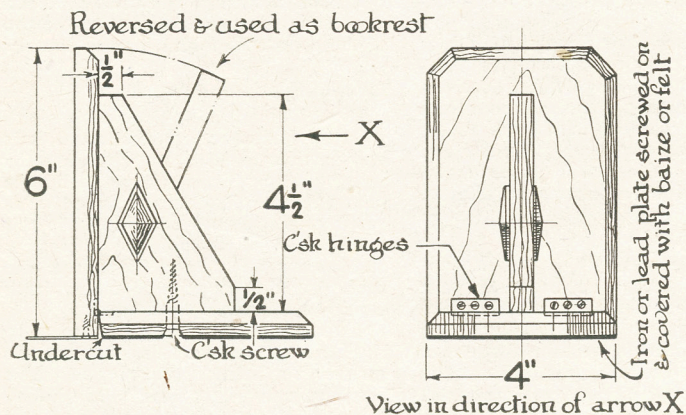
and allows the use as a book-rest—most useful for students. A small triangular space is left in the corner where the hinges are. This saves having a sharp, easily-damaged corner on the bracket.

The whole, waxed polished, would make a fine present for a student or book-lover. A pair can easily be made in one evening.

Do not, however, endeavour to rush the work in order to get it done quickly. It is much better to have a satis-

factory piece of work you can show with pride, rather than have to be apologetic for hurry—and bad workmanship.

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## Angling—(Continued from page 218)

Perch are, perhaps, best of all to start on. They bite boldly, and fight well. Perch take worms readily enough, or such baits as maggots. Perch bite in a different way to dace, for whereas these snatch the bait quickly, pulling the float under with a quick jerk, perch are more deliberate and you can give them time before striking. Perch give two or three tugs, the float 'bob, bob, bobbing' before it goes under. Perch also go about in schools and where you catch one, there you may catch others also. Use a No. 10 hook for these dark-striped fish.

Tench and carp provide sport to

anglers fishing in weedy ponds, meres, and lakes. But in summer you must be out at dawn or just after. At early morning on hot days both these fishes bite well. They attain a big weight and are worth catching for sport, but they are not good for eating. Baits include worms, sweet paste, grubs, snails, slugs, maggots, etc.

One other summer fish is the chub, and again this fish is well worth seeking, being very strong and of good size. Baits are many, including those given above plus cheese paste and fruit such as cherries, and red currants. Hook should be No. 8 or No. 10 crystal.

Some anglers use two hooks when fishing in lakes and ponds or in slow-flowing rivers. One hook is at the end of the cast as usual, and the other is suspended above it, so it hangs 2 ins. or so above the bottom, whilst the end hook lies on the bed (see sketch). There is a disadvantage—when playing a fish hooked on the lower hook, say, the upper one may catch in a weed or other entanglement and cause trouble for you.

Remember, in hot sun-bright periods during summer, the best times to fish are early morning and again at evening up to dusk, or even during the night, when the bigger fish are often feeding.

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# Those who like artistic work should make a trial of HANDPAINTED FABRICS

**T**HE art of handpainting on fabric is by no means a new craft, yet it is surprising how large a number of hobbyists are completely ignorant of this fascinating branch of decorative craftwork.

Nothing expensive is required in the way of tools or equipment, and providing a few elementary rules are followed there is nothing to stop the beginner, whether young or old, from achieving really professional-looking work from the start.

Another advantage of this form of pastime is that it need occupy very little room. In fact, it may be carried out on the living-room table without inconveniencing any of the other members of the family—unless they are waiting to do some fabric-painting, themselves!

## Equipment

In the first instance, some attention must be paid to your choice of colouring agent. Ordinary artists' oil-colours may be used for some classes of work but as these will only produce successful decorations on certain types of fabric you are advised to try a little of the colour on a scrap of the fabric you propose to use before actually commencing the piece of work itself.

One of the chief faults with artists' oil-colours is that the oil has a tendency to stain certain fabrics, thereby creating a very unsightly blurred outline to a painted motif. Much of this trouble can be eliminated if a quantity of the colour is first squeezed out on to a pad of blotting-paper and allowed to remain there for about an hour so that all surplus oil is extracted before the colour is applied to the fabric.

## Special Colours

Fortunately, enterprising manufacturers have placed special colouring agents on the market for hand-painting fabric. They are not expensive. A 3in. tube costs only 10½d., and a wide range of colours is available.

These particular fabric-painting colours can be employed to form a relief decoration on textiles, as well as an ordinary flat coating of colour. And besides the actual paints, small tubes of coloured and metallic powders and minute glass beads can be obtained. These are used as a dusting medium. While the original application of paint is still wet, the powders, flakes or globules are lightly shaken on to the decoration, where they will readily adhere.

Once you have obtained the necessary colours the only other equipment you will require are brushes, scraps of clean rag, a small quantity of turpentine or its substitute, drawing-pins, and either a large drawing board or a sheet of plywood or hardboard.

Among the many articles which look particularly attractive when hand-painted may be numbered: d'oyleys and table-mats of all descriptions, tray-cloths, tablecloths, table-runners, scarves, neckties, cushion covers, tea-cosies, etc.

## Designs

The scope for originality so far as the design goes, is, of course, unlimited. If you have sufficient ability with pen or pencil there is no reason at all why you should not design attractive and exclusive patterns for your fabrics. But do not despair if you feel that you are altogether lacking in the necessary artistic talent. Embroidery patterns, which can be obtained for a few pence from any wool or needlework shop, may be extensively employed for this form of work.

In choosing your pattern or motif some thought must, of course, be given to the size, shape and subsequent use for which your article is intended. As a general rule garlands, sprays of flowers and similar floral designs may be freely adapted for hand-painted work. Choose small patterns or motifs for small articles, and larger designs for items like tablecloths and bedspreads.

There is no need for the ambitious craftworker to confine himself exclusively to painting floral designs, however. Animals, figures, scenes from pantomime, carnival and the hunt, historical characters, galleons and similar naval scenes will all be drawn upon by the craftworker who likes to make his work look original.

## Applying the Colours

Your first task will be to transfer your design to the fabric upon which you propose to paint. If you are working from an embroidery transfer this part of the job is greatly simplified. The transfer must be pinned to the material, face-side downwards, and then a warm iron passed over the back of the paper. If the embroidery sheet is first damped with a sponge the transfer of the printed design is usually more complete.

If you intend to work from an original pattern which you have already drawn out on paper you may either transfer your original direct through a sheet of carbon paper, or take a carbon copy on to another sheet of paper and then transfer this copy in exactly the same manner as that employed for an ordinary embroidery transfer—i.e. iron the sheet of paper from the reverse side.

When the outline of your design has been imparted to the fabric, place two or three thicknesses of newspaper over your drawing-board and pin the fabric into position, stretching it tautly to

ensure its perfect freedom from creases.

You must now decide whether you intend to outline the design in relief, filling the areas enclosed by these outlines with an application of flat colour, or employ solely a relief or a flat surface to your painted decoration.

For the relief painting of textiles one manufacturer supplies a range of colours in small tubes, with conical attachments for screwing on to the tubes so that the colour may be ejected in a thin, continuous strip. This form of work is extremely fascinating—although, perhaps, one needs to have had more experience in decorating a cake with icing-sugar than in the normal application of paint with a brush!

CUT ALONG PAINTED EDGE WITH SCISSORS



Fig. 1—A pleasing effect with edging work

Besides the conical metal attachments, the same manufacturer supplies special paper cones. These are filled with colour, the tips are snipped off and then the wide mouth of the cone is folded over and pressure is applied to the top of the cone with forefinger and thumb.

## Outlining and Bodywork

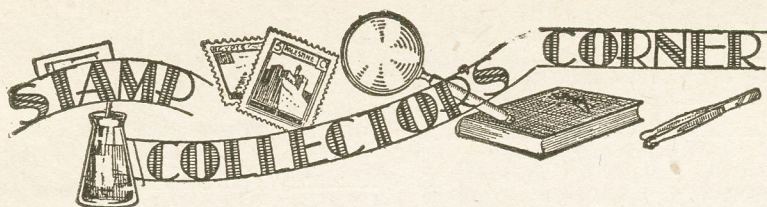
As well as outlining your design with this relief method of decoration, it is also possible to fill in any given area by laying one line of colour down beside the next until the material is covered. The result of employing your colours in this fashion will be to produce a pleasing embroidery effect in a fraction of the time that the actual embroidery itself would have taken.

The colours may also be brushed on to the fabric to produce a flat or graduated surface. The introduction of the metallic powders and glass 'beads', mentioned earlier in this article, offers a good deal of scope for further embellishment of your painted fabric.

The dusting on of any powders or 'beads' should be done while the paint still retains its full adhesive powers—i.e. within ten or fifteen minutes of actually applying the colour itself to the fabric. However, if dusting is attempted too soon some of the heavier of these dusting media may sink too deeply into the colour. Some experimenting with paint and 'beads', etc., on a small scrap of waste fabric is advisable for the beginner.

A particularly pleasing effect can be obtained by arranging for your motif to overhang the edge of your article (see Fig. 1) and by trimming the fabric close to the painted outline an attractively natural arrangement is achieved. (166)





## Bird Collections on Stamps

**Q**UITE a number of people go in for thematic collections now-a-days. That is to say they choose a theme or subject and only collect stamps the design of which illustrates a point of their theme. Some of these subjects are extremely interesting, not only to the owner of the collection, but also to those who know nothing about stamps.

Many people, for the sake of good manners, appear to be interested in a collection, even if they wish they could shut the book and put it down. But if the stamps illustrate something in addition to philately, then they can genuinely take an interest. A thematic collection gives the collector a tremendous amount of scope for study and displaying art.

The writer once saw a collection of stamps illustrating birds and the album was decorated with sketches showing the nests, the eggs and the young of the bird portrayed on the stamp. It was a most effective collection and the notes which went with the sketches showed the care the collector had exercised.

There are quite a number of well known birds—such as the Sooty Tern, which appears on the 1/- stamp of the 1934 issue from Ascension. Terns are like gulls, though a little smaller. They have graceful flight, and although they have webbed feet they seldom swim. The range is more extensive than that of any other bird, so that it might just as well appear on a stamp from the northern hemisphere as on the one from Ascension.

We do not find many gulls as the central theme of a stamp, but they are to be seen on the frame of the St. Pierre et Miquelon stamp of 1932 which has a fishing trawler in the centre. We show this stamp here especially to illustrate the point about finding interest in the framework of a stamp. You need to use quite a lot of care and a magnifying glass if you want to get all there



The Black Swan

is to be seen.

Another type of fishing bird which can be seen on a stamp is a Booby. This is found on the Cayman Islands stamps—the penny and the two shilling values of the 1935 issue. They do not appear on the King George VI issues.

As the name suggests they are rather foolish birds. Not only will they allow themselves to be pushed off their nests and to have their tails pulled out, but they will sometimes alight upon a ship at sea and make no effort to avoid capture by the crew.

Another bird which when on land appears to be very quiet and tame, but when on the wing is far from this, is the frigate bird. It can be seen on the stamps of the Gilbert and Ellice Islands, the halfpenny value of the 1939 issue. Although it feeds almost entirely on fish it hardly ever descends to the water for its food. It chases the gulls and forces them to give up the food which they have caught. If the gull objects to doing this, then the frigate bird catches the gull by the tail and shakes it until it drops the food.

### Black Swans

For the larger water birds we turn to the stamps of Western Australia. This part of the island continent first issued stamps in the year, 1854. The main part



Gulls of St. Pierre

The Booby that fishes

A Black-necked Swan

of the design then was a black swan and this has remained the chief part ever since. In fact, every stamp with the exception of the higher values has had a black swan on it.

In the early days of the discovery of Australia black swans were quite common, but now they are comparatively rare. Luckily they breed in captivity so they should not disappear altogether.

If you have not got a specimen of the stamps of Western Australia then you can still see a black swan on the Australian stamp of 1929. This was issued in connection with the centenary of Western Australia, as the latter had ceased to issue stamps of her own from 1912.

Not only is the black swan kept in captivity but so is the black-necked swan and this you can see on the one penny and twopenny values of the Falkland Islands of the 1938 issue. Like the white or common mute swan the black-necked bird carries its young on its back. But as the cygnets cannot climb out of the water on to the mother's back without help, she holds one leg in a backward direction. This forms a landing stage upon which the young climb and so make their way on to the back!

You need be careful about these stamps from the Falkland Islands, for the colour makes a great difference to the value. The one penny stamp of the design shown, if it has a black centre with a carmine frame, is catalogued at

£1; if black and scarlet, then the value is 5/-! But there is another design for a penny stamp which shows the Battle Memorial and is only worth 2d.

### Larger Birds

The same country and set give us some more big birds. There is the Upland Goose on the fourpenny stamp, the Turkey Vulture on the 1/3 and the Penguin on the 2/6. As we are mainly dealing with water birds this time, and will deal with the others later, we shall not say anything about the turkey vulture yet.

The upland goose is unusual in one respect. That is that most geese show no difference in colouring between the sexes, but in this case there is; the males are almost entirely white and the females are soberly clad in chestnut and greyish

brown, with flanks barred with black.

The appearance of the King Penguin is known to nearly everyone, especially those who followed the adventures of Pip, Squeak, and Wilfred. Although the appearance may be well known, it is doubtful if the nesting habits are known by so many. No nest is made and when the one egg is laid it is carried on the top of the feet and covered by a fold of the skin which is so loose that it will fold over and protect the egg from the intense cold.

As soon as the young chick hatches that too has to be protected from the cold. Unfortunately a great number of them die from cold and when this happens, the parents then try to steal a chick from a more fortunate pair. Unfortunately in the struggle which ensues, the life of the prize is also often lost. The mortality among these birds is something like seventy per cent.

One of the most curious birds that we see in the stamp album is the Flamingo. We can see them on the eightpenny value of either the 1935 or the 1938 issue from the Bahamas. The former is a nice stamp, priced at 12/6, while the latter, although of the same design (except for the changed King's head), is only 11d.

That completes a very good collection of water birds, and it would make a most interesting exhibit. Next time we shall deal with some of the land birds and give some of the items of interest about them.



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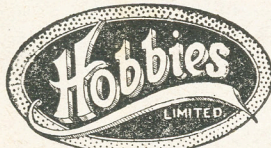
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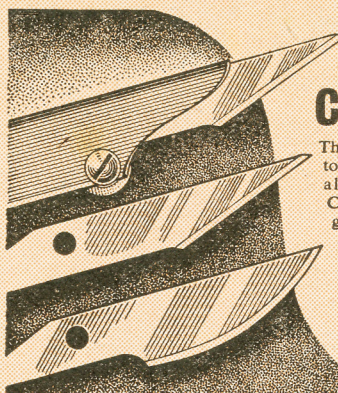
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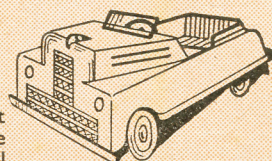
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